April 9, 2009

Michael Adackapara
Division Chief
Santa Ana Regional Water Quality Control Board

RE: TENTATIVE ORDER NO. R8-2009-0030

Dear Mr. Adackapara,

Thank you for the opportunity to comment on the current draft of the Orange County Area NPDES permit. Overall, this draft is a great improvement. In particular, the change in Section XII, covering New Development, requiring mitigation of the water quality design storm instead of the setting an effective impervious area threshold is substantially more protective and less prescriptive.

Please find a table attached summarizing comments and suggested changes for the tentative order. Please let me know if you have any questions.

Sincerely,

Vaikko P. Allen II, CPSWQ, LEED-AP

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Suggested Changes
NPDES No. CAS618030
Orange County Areawide Urban Stormwater Runoff Permit - Santa Ana Region

Submitted by Vaikko Allen, CPSWQ, Regulatory Manager - Southwest
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Section	Proposed Change or Comment	Justification
Finding 66	Change first sentence to "Treatment control BMPs with a hydraulic connection to groundwater, including unlined detention basins, infiltration areas (including LID-based) and constructed wetlands, could be sources of groundwater pollution and could become a nuisance and/or cause the spreading of surface water pollution if not properly designed and maintained."	This section incorrectly lists vortex systems, stormwater filters and catch basin inserts as potentially contributing to groundwater contamination. These BMPs, and other catch basin or vault based BMPs have no communication with groundwater and therefore can not be a source of groundwater pollution. They can not cause the spreading of surface water pollution since no pollutants are generated by or added to these devices. This is in contrast to vegetated BMPs, which even with no groundwater connection, may cause or contribute to surface water pollution if pollutants such as fertilizers, pesticides, herbicides and excessive irrigation are applied.
Finding 67	Change first sentence to "If not properly designed and maintained, the BMPs identified in Finding 66, and vault based BMPs with no groundwater communication such as vortex separators, catch basin inserts and various types of stormwater filters could create a nuisance and/or habitat for vectors22 (e.g., mosquitoes and rodents).	This change is needed to include the BMPs removed from finding 66.
Section XII.B.5.f	Add a requirement for spill protection in these high risk areas.	Traffic accidents, spills and persistent leaks of automotive or equipment fluids can contaminate groundwater and can be very difficult and expensive to clean up. In the high risk areas identified in this section, preventative measures should be taken to avoid contamination of soil and groundwater. For example BMPs should be installed with a minimum of 75 gallons of spill retention capability should be installed upstream of infiltrating BMPs. This minimum volume corresponds to a single diesel tank or hydraulic fluid tank capacity of a large truck.
Section XII.C.2.b	Replace "consider construction of parking lots walkways, etc., with permeable concrete and porous asphalt" with construction of parking lots walkways, etc., with permeable materials"	There are a variety of permeable paving alternatives beyond permeable concrete or porous asphalt. For example concrete pavers, and various open cell plastic grids that can be filled with gravel or planted with grass.

Section	Proposed Change or Comment	Justification
Section XII.C.2.b	Replace "minimize pipes, culverts and engineered systems for stormwater conveyance" with "minimize changes to the time of concentration on site"	Pipes and other structural conveyance systems can be used to disconnect impervious areas. For example runoff from a parking lot could be collected in a catch basin, conveyed through a pipe and discharged to a permeable area that is not immediately adjacent to the parking lot. This approach is particularly useful on retrofit sites where impervious area grading and landscape area is location is established. Oversized pipes with downstream flow controls can also be designed to provide detention on site.
Section XII.C.4	Remove this section	This section requires LID BMPs to capture the 85th percentile event. This should be the goal, as is captured in Section XII.C.5, but it will not be feasible to mitigate the entire 85th percentile event with LID BMPs on every site, and it may not be feasible for every LID BMP to be large enough to mitigate that design storm. In such cases, the use of LID BMPs should be maximized and the balance of the 85th percentile volume that is not treated by the LID BMPs on site, close to the source must be addressed following sections XII.C.6-7.
Section XII.C.5	Add a requirement that treatment control BMPs must be designed to have medium or high effectiveness for pollutants of concern on site based on full-scale, in-field performance monitoring conducted following a peer reviewed testing protocol.	Section XII.B.4 contains water quality design storm requirements. It does not specify any level of treatment that is required by BMPs treating this design storm. This addition is needed to ensure that BMPs are effective in controlling the pollutants that are expected on site.
Section XII.C.7.a-b	Remove these sections	These sections reiterate the requirement to mitigate the water quality volume on site using LID BMPs which is already given in section XII.C.5. The only distinguishable difference between these sections and previous requirements in section XII.C, is the location on the site at which the LID BMPs are implemented. It is overly prescriptive to dictate where on a site LID BMPs should be implemented. From the perspective of the water quality and quantity leaving a private site and entering the MS4, it is irrelevant where the LID IMPs are implemented. There are economic benefits that can be realized by using centralized vegetated, infiltrating BMPs. For example construction costs may be lower, inspection and maintenance burden may be reduced and fewer easements for service may be required. There is also an economy of scale for some BMPs, where larger BMPs can mitigate runoff at a lower cost per volume than smaller BMPs. These kinds of economic decisions should be left to the site owner as long as the overall water quality and quantity reduction requirements are met on site.